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Grätzer, Gitte ; Rost, Katja

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# **STRUCTURAL EFFECTS OF SEX-RATIOS AND POWER DISTRIBUTION ON THE SURVIVAL RATES OF FEMALE MONASTERIES**

**GITTE GRAETZER**  
INSTITUTE OF SOCIOLOGY  
UNIVERSITY OF ZURICH  
ANDREASSTR. 15, CH – 8046 ZURICH

**KATJA ROST**  
UNIVERSITY OF ZURICH

## **ABSTRACT**

We draw on Kanter's Token theory to analyze the relationship between sex proportions, the distribution of power and the survival chances of 4,606 Catholic monasteries over a period of 1,483 years. The hypotheses will be tested by survival analysis. We find partial support for the theoretical framework of Kanter.

## **INTRODUCTION**

The fact that a small minority of men or woman experiences disadvantages in a bigger group dominated by the other gender has long been acknowledged in the literature. Kanter's Token theory (1977a; Kanter, 1977b) is often cited as the earliest source on this topic. She states that an important determinant of dominant/subordinate group interaction patterns is the ratio of majority to minority persons in the group. In skewed groups, majority members control the group and its culture, while minority members occupy token status because they are treated as symbolic representatives of their social category (Kanter, 1977a). Suffering from isolation and gender-role stereotypes, token individuals tend to be less successful relative to group standards. From her findings, Kanter deduced the concept of number balancing, i.e., the movement from a small to large minority. This implies that once a "critical mass" of women or men is reached, female or male representation, respectively, becomes normal so that it will lead to a higher acceptance on the part of the former dominant group. Thereby token-related disadvantages, such as token isolation and performance failure, will disappear.

Various criticisms that can be classified into two main areas of concern – on a conceptual level as well as a result of ambiguous empirical results – have, however, been made against the Token theory. First, the core assumption of skewed sex-ratios has been criticized by several scholars as it is based on numbers alone and does not account for questions of power and status that could also influence group interactions (Laws, 1975; Yoder, 1991). Specifically, men throughout history have had higher social status than women. Accordingly, past research indicates that Kanter's framework is not applicable to male tokens. Researchers have attributed these findings to socio-cultural definitions of masculinity and femininity as well as patriarchal gender relations (e.g., Lo Coco, Gullo, Lo Verso, & Kivlighan Jr, 2013; Zimmer, 1988). Second, the concept of critical mass has been criticized. Based on the findings of Blalock (1956, 1957) and Blau's theory of social structure (Blau, 1977a; 1977b, 1979), the alternative perspective suggests that "it is in settings where minorities constitute a large proportion of the total group – not where they are tokens – that they suffer their greatest hardship" (South, Bonjean, Markham,

& Corder, 1982: 588). Because the majority feels threatened by a numerical surge of the minority group, they react with heightened levels of discriminatory behavior in order to limit the power gains of the growing lower-status minority (Yoder, 1991). For this reason, women in a minority position may be more effective in avoiding performance pressures and in influencing the majority through facilitated individual and collective action aimed at propagating women's issues (Moscovici & Faucheux, 1972; Childs & Krook, 2008).

Together, these two claims suggest that the relative social status of the tokens and dominants has to be taken into account. However, there is a surprising paucity of quantitative empirical support for the assumption that asymmetrical power between and within groups may interact with group proportions, thereby strongly influencing the performance of tokens and dominants. We wish to contribute to this gap in the literature. We draw on Kanter's Token theory (Kanter, 1977a), the status expectations literature and gender role stereotypes literature (e.g., Roth, 2004) to develop five hypotheses on the relationship between gender proportions, the distribution of power and organizational survival chances, which we test on a dataset of 4,606 Catholic monasteries of the largest 89 Catholic Orders over a period of 1,483 years.

The monastic context seems particularly suitable for that purpose. First, Catholic Orders and their monasteries accept either males or females as organizational members, which allows calculating the sex-ratios within a region at a particular time. Second, we use the survival of a monastery as the dependent construct as it is an objective performance measure. In contrast to most research settings, in our case organizational survival is an excellent performance measurement for males and females as monasteries are either managed by monks or by nuns. Third, the long time period of about 1,500 years allows us to make more conclusive statements about the validity of the concept of critical mass vs. the concept of minority groups able to influence the majority group. In the short run, empirical support for both perspectives has been mixed; while some studies show moderate support other studies indicate strong support (South, Bonjean, Markham, & Corder, 1982; Zimmer, 1988). Fourth, while previous studies predominantly analyze the performance effects for tokens while ignoring the reactions of dominants, we are able to analyze the performance effects for both. Finally, while almost all previous studies focus on the negative effects of tokenism within an organization or a workplace, we shift the focus to regional sex-ratios within a whole industry. It allows for more valid conclusions independent of outliers or special cases.

## **THE MONASTIC CONTEXT**

The earliest male and female monasteries in medieval Europe were founded from the early 6<sup>th</sup> century and onward. After a long period of decline and stagnation between the 7<sup>th</sup> and the 11<sup>th</sup> centuries, the big rise came between the 12<sup>th</sup> and the 14<sup>th</sup> centuries, when the percentage of female monasteries more than doubled (from about 15% in 1100 to about 35% in 1400). In some parts of Europe, male houses declined steadily after the 13<sup>th</sup> century and nuns even constituted the majority of the cloistered religious. Between the 15<sup>th</sup> and 18<sup>th</sup> centuries, when the total number of male monasteries turned sharply upward, the percentage of women dropped slightly (to ca. 30% in 1800). Since 1830, we can observe a renewed upswing in the share of female cloisters up to 45% in 2011. Due to a large variance of regional female ratios in the dataset (from 0 % up to 100 %), we are able to test whether structural sex compositions affect survival rates of monasteries.

Some readers may have reservations, as relying on Kanter's formulae, that discrimination declines as minorities grow in number, may mistake cause and effect. However, historical research suggests that the rise and decline of female monasticism must be viewed as part of a larger story of socioeconomic and institutional change, rather than being a result of female rehabilitation (Venarde, 1997). For example, the multiplication of nunneries during the central and late Middle Ages has been attributed, to, among other things, changing familial and marital situations (aristocratic "matrimonial crisis" leading to diminishing property rights for women and declining opportunities outside the cloister), agricultural expansion (leading to foundation of nunneries in the countryside and unknown territory), the decentralization of power (meaning that also petty nobles and simple local lords took part in the foundation of nunneries which resulted in the opening up of monasteries for lower class women), male-centered monastic reform movements (e.g., the Cistercian or mendicant movements that challenged traditional approaches to monasticism led to a rise in the foundation of female convents of the threatened traditional orders, such as the Benedictines), or the influence of charismatic wandering preachers and hermits (who inspired spiritual women to act as religious entrepreneurs) (Venarde, 1997). During this great period of monastic foundation, most male clerics, monks and popes took no active part in the foundation of nunneries. The growing interest in strict bureaucratic regulation of female monasticism on part of the Church reflects its reactive, rather than encouraging role. Thus, in line with Kanter's theory, tokenism appears to be a self-perpetuating process that reinforces low numbers of women, that only can be disrupted by external factors and outside intervention (Childs & Krook, 2008).

Even though economic success is not an aim in itself, both, male and female monasteries required a secure economic foundation base in order to attain their religious aims (Rost, Inauen, Osterloh, & Frey, 2010). Female convents are characterized by economic structures similar to those of male communities, e.g., they built, farmed, raised animals, produced clothes or copied books (Smith, 2009). However, due to sometimes limited possibilities to practice subsistence economy, the survival and growth of male and female Catholic Orders and their monasteries heavily depended on access to resources from the external environment, e.g., the donation of goods and property from the Church and the high aristocracy, as well as the availability of labor forces. Throughout the Middle Ages the nobility had a strong interest in the foundation and endowment of new monasteries because they went along with real economic and political benefits (Hager, 1992). For example, while female monasteries served as safeholds for excess daughters, male monasteries offered opportunities for political interference through supporting the career of a monk as cardinal, bishop, pope or as advisors to kings. However, particular economic or socio-demographic circumstances of the region dictated whether creating and endowing monasteries was a beneficial alternative for noblemen or noblewomen. Thus, the foundation of a monastery can be characterized as a resource-allocation strategy or a trade-off decision, implying that male and female monasteries competed for essentially the same resource base (Schulenburg, 1989).

Even though male and female monasteries have many similarities in terms of their organizational and economic structures, there were, however, important differences that were connected with the special position of women within the society and the Church (Rösener, 2008). Within the observed time period of this research, the acceptance of females was quite low in most societies (Duby & Perrot, 1993[1990]). Compared to males, females were viewed as intellectually and physically inferior, and thus lived under male authority. Females were mostly excluded from the educational system, guilds and many aspects of public and social life. Being a

nun was one of the few “occupations” available to women in the Middle Ages (Bynum, 1987). However, with increasing institutionalization of the Roman Catholic Church, the regulation of the claustration of nuns became stricter. For example, Pope Boniface VIII’s decretal, “Periculoso” (1298) specified that nuns should stay strictly cloistered and, in seeing women as potential transgressors, it prescribed new and more rigorous standards of supervision and control than the Western Church had previously demanded. The restriction of the movement of religious women went along with their increasing dependence on men and a general erosion of women’s public power (Brundage & Makowski, 1994). First, communities of nuns had to appoint a (male) proctor – mostly the abbot of a nearby monastery - who worked in the secular world for the economic interests of the convents (Hager, 1992). Second, the choice of a location for the foundation of a subsidiary was not possible without the help of affiliated monks. Third, monks were responsible for the pastoral care of nuns. Finally, nuns were more dependent on lay sisters, lay brothers, maidservants and other work force from farming families or the lower strata of the urban population, because large parts of the monastic estate (sometimes including thousands of hectares in fields, gardens, forests, meadows etc.) laid outside the monastic walls (Rösener, 2008).

## **HYPOTHESES**

### **Structural Effects of Sex-ratios**

Based on Kanter’s Token theory, the status expectations literature and gender role stereotypes literature, we develop five hypotheses on the relationship between gender proportions, the distribution of power and organizational survival chances. In Hypothesis 1, we test Kanter’s assumption that performance disadvantages of tokens (i.e., nuns) relative to dominants (i.e., monks) will disappear in more gender-balanced groups.

*Hypothesis 1: The higher the (visible) share of female monasteries within a region, the higher the survival prospects of female monasteries.*

### **Structural Effects of the Distribution of Power**

Hypotheses 2 and 3 draw on the assumption that performance differences between women and men are based on gender-based differences of status and power, rather than on structural conditions. Basically, we first assume that a higher geographic distance of a monastery to the Vatican goes along with higher survival prospects of this monastery. A higher geographic distance within the time period of this study implied massively higher transaction costs to control local subunits because transportation and communication technologies were slow and – in particular for higher distances – relatively uncertain. A higher distance to Rome or Avignon therefore implied that the Vatican could exert less direct or indirect influence on the monastery. Even though monasteries also profited from papal mentorship and financial support, a stronger influence of the pope has been, in many cases, disadvantageous for a monastery, because a lacking acceptance of the pope or the Church often threatened the survival of the monastery (e.g., during Reformation). We expect that the positive relationship between geographic distance from Rome/Avignon and survival prospects is especially high for females due to the negative stereotyped image of women that was largely shaped by the Catholic Church.

Second, we assume that male and female communities can establish a cooperative and complementary relationship that benefits both communities. However, any situation that makes women reliant on help from men sets up an imbalance that can interfere with cooperative efforts (Gold, 1993). Materially, this imbalance becomes apparent with the fact that female monasteries, on average, lived in greater destitution than their male counterparts (Wittberg, 1994). We therefore argue that a lower number of cross-sex relatives in direct proximity of a monastery has been more positive for female monasteries as compared to male monasteries because males could exert less influence on females, thus heightening their autonomy.

*Hypothesis 2a: The higher the geographic distance of a monastery to Rome/Avignon, the higher the survival prospects of the monastery.*

*Hypothesis 2b: The relationship is stronger for female monasteries as compared to male monasteries.*

*Hypothesis 3a: The higher the number of cross-sex-relatives in close proximity to a monastery, the higher the survival prospects of the monastery.*

*Hypothesis 3b: The relationship is weaker for female monasteries as compared to male monasteries.*

### **Structural Effects of Sex-ratios Considering the Distribution of Power**

In Hypotheses 4 and 5, we introduce the three-way-interactions between (i) the gender of the inhabitants of a monastery, (ii) the female ratio within the region of a monastery and (iii) the number of cross-sex-relatives in the direct environment of a monastery, or the geographic distance of a monastery to Rome/Avignon. This suggests that the positive performance effects of a numerical surge of the female group especially holds in the case of more gender/status-neutral settings, i.e., when the number of male peers in direct proximity of a female monastery is low or distance to Rome/Avignon is high, and, thus, female authority is high.

*Hypothesis 4: A higher (visible) share of female monasteries within a region only increases the survival prospects of female monasteries if the geographic distance of the monastery to Rome/Avignon is high.*

*Hypothesis 5: A higher (visible) share of female monasteries within a region only increases the survival prospects of female monasteries if the number of cross-sex-relatives in close proximity to the monastery is low.*

## **RESEARCH METHODOLOGY**

In 2011 and 2012, we collected a sample with complete data of 4,342 monasteries of 81 Catholic Orders located in 116 countries over a period of 1,483 years. We run cox proportional hazards models on multiple-record data to predict the survival function of monasteries. The dependent variable of our study is the survival rate of a monastery. Our independent variables are gender, geographic distance of a monastery to Rome/Avignon, female ratio of a region and

number of cross-sex-relatives in a sub-region. The latter two predictors were lagged at year  $t-50$ . Several control variables are included, e.g., type and foundation year of Catholic Order, institutional distance between home and host country, and GDP of the host region.

## **GENERAL RESULTS AND DISCUSSION**

We find evidence for female underachievement in token situations. Female monasteries in male-skewed regions have significantly lower survival rates compared to men than women in more balanced regions (Hypothesis 1). Taking into account questions of power and status, the results imply that a higher autonomy from the Vatican is more desirable for women than for men. However, the effect is not significant (Hypothesis 2b). Results further show that females profit much less from a higher number of cross-sex-relatives in their direct environment as compared to males, supporting Hypothesis 3b. Connecting both power-situations to female ratios within a region, results point to a similar direction: When the number of related male monasteries was high, a higher female ratio had no considerable effects on the survival prospects of female monasteries. However, in the absence of male peers, nuns profited considerably from a higher regional female ratio, supporting Hypothesis 5. This shows that females can benefit from a numerical increase if the status differences between males and females are more or less equal within a region, for example because they are not directly controlled by male relatives. The three-way-interaction between the gender of the inhabitants of the monastery, the female ratio within the region of the monastery and the geographic distance of a monastery to Rome/Avignon turns out to be not significant, giving no support for Hypothesis 4.

While previous studies mostly focus on the performance of token women or token men, we can also shed some light on the performance effects for the dominant group of monks that is confronted by regional numerical surges of women. Results first show that a higher share of females in a region has no significant effects on the survival prospects of male monasteries. Second, both, men and women, benefit from the physical presence of cross-sex relatives in close proximity, but men even more than women: A higher number of female relatives in the direct environment of a male monastery increases the survival prospects after 500 years by 25%. A higher number of male relatives in the direct environment of a female monastery increases the survival prospects after 500 years by only 10%. Furthermore, when the number of related female monasteries in a region is high, men enormously benefit from a further increase of the female ratio (ca. 15% higher survival chances after 500 years). This finding may be explained by the fact that males exploit the additional resources provided to females if their visibility increases.

In sum, results indicate that both women and men profit (or at least do not suffer) from higher shares of females within a whole organizational field, and both benefit from collaboration (cross-sex-relatives). However, returns of collaboration are skewed in men's favor. Thus, quotas or naturally grown female shares would not help in such situations. In many professional settings, women encounter discrepancies in knowledge and experience when entering institutions previously dominated by men. A common strategy to deal with such discrepancy is to rely on the help of a mentor (Kanter, 1977a). However, the position of a mentor is almost always filled by a man, thus reinforcing a gendered hierarchical relationship that contributes to interaction based on deference rather than equality. The creation of solely female committees or organizational bodies as a base for operation could therefore help to equalize gender status imbalances (Gold, 1993).

## **REFERENCES AVAILABLE FROM THE AUTHORS**